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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,847	08/25/2006	Kyuhei Kitao	3273-0227PUS1	3804

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EXAMINER	
MCCULLEY, MEGAN CASSANDRA	
ART UNIT	PAPER NUMBER
1796	

NOTIFICATION DATE	DELIVERY MODE
02/22/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/590,847	KITAO ET AL.	
	Examiner	Art Unit	
	Megan McCulley	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 January 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *7-9,11,12 and 15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *7-9,11,12 and 15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 August 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

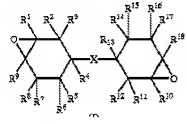
1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

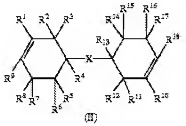
DETAILED ACTION

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 7-9, 11, 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takai (US 2003/0059618) in view of Ryan et al. (U.S. Pat. 5,880,297).

Regarding claims 7- 9, 15: Takai '618 teaches a process of producing a compound of  wherein X represents a divalent group selected from oxygen atom, a sulfur atom, -SO-, $-SO_2-$, $-CH_2-$, $-C(CH_3)_2-$, $-CBr_2-$, $-C(CBr_3)_2-$, and $C(CF_3)_2-$; R^1 to R^{18} each may be the same or different from each other and are a hydrogen atom, a halogen atom, a hydrocarbon group that may contain an oxygen atom or halogen atom, or an alkoxy group that may have substituent groups (para. 23 and 24), the process comprising starting with an olefin of the structure:



(II)

(para. 23) is epoxidized with peracetic acid (para. 51) having substantially no water (para. 26), followed by removing the solvent ethyl acetate (para. 55) by distillation (para. 58). The purity of the compound is 93.4% (Example I-1). As evidenced by the instant specification (the instant Comparative Example 1 is identical to the process of Takai, Example I-1), the concentration of impurities having a shorter retention time than the compounds is 11.9%, which is within the claimed range and the concentration of reactive intermediates, of which the instant formula (III) is one, is 2.0% also within the claimed range (instant comparative example 1).

Not disclosed is the distillation step occurs with a wiped film evaporator carried out in a single pass at a heating temperature of 180-350 ºC and a pressure of 4-50 Torr. However, Ryan et al. teaches a wiped film evaporator used to distill and purify epoxies (abstract, example 1). Takai and Ryan et al. are analogous art since they are both concerned with the same field of endeavor, namely methods of obtaining pure , reduced color epoxies. At the time of the invention a person having ordinary skill in the art would have found it obvious to combine the wiped film evaporator of Ryan et al. with the process of Takai and would have been motivated to do so for such desirable properties as obtaining a low color product which is highly pure, as evidenced by Ryan et al. (col. 2 lines 54-63). Further, the operating temperature and pressure of distillation are result effective variables which can be optimized. See *In re Aller*, 105 USPQ 233 and MPEP

2144.05. At the time of the invention a person having ordinary skill in the art would have found it obvious to optimize the temperature and pressure of the distillation step and would have been motivated to do so since Ryan et al. teaches elevated distillation temperatures may lead to additional by-product reactions, which adds to the coloration of the epoxy (col. 2 lines 54-63 and col. 4 lines 1-13), while the temperature needs to be adequate to make the composition flowable (col. 5 lines 5-10). Also the pressure is dependent on the desired temperature for a specific epoxy (col. 5 lines 10-15). Further, the ranges disclosed in Ryan et al. as being typical fall within the claimed ranges (pressure 0.05-5 mm Hg, temperature 100-200 °C col. 5 lines 15-20). A prima facie case of obviousness may be rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. See *In re Boesch and Slaney*, 205 USPQ 215.

While the concentration of the high-molecular-weight components having an elution time shorter than that of the alicyclic epoxy compound and the color hue value are not disclosed, it is the position of the Office that the low concentration and color are latent properties achieved during the distillation step. Evidence of this is found in Ryan et al., which teaches distillation removes lighter components (col. 4 lines 50-55) and heavier components (col. 4 lines 66-67) than the desired compound which add to the coloration of the epoxy (col. 2 lines 54-63) and the product has reduced color (abstract).

Regarding claim 11: Takai '618 teaches the peracetic acid is obtained by the oxidation of the corresponding aldehyde (para. 25).

Regarding claim 12: Takai '618 teaches the water content of the peracetic acid is 0.8% by weight or less (para. 26).

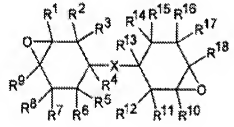
Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 7 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 20 of copending Application No. 11/792,782. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 7 of the instant application claims the process of



making wherein X is a divalent group selected from the group consisting of an oxygen atom, a sulfur atom, -SO-, $-SO_2-$, $-CH_2-$, $-C(CH_3)_2-$, $-CBr_2-$, $-(CBr_3)_2$, and $-C(CF_3)_2-$; R^1 to R^{18} each may be identical or different from each other and are a hydrogen atom, a halogen atom, a hydrocarbon group that may contain an oxygen atom or halogen atom, or an alkoxy group that may have a substituent by epoxidizing the corresponding olefin, removing solvent and purifying by distillation at a temperature and pressure overlapping claim 20 of the copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

Applicant's arguments filed 1/28/2010 have been fully considered but they are not persuasive.

A) Applicants argument that Ryan et al. does not disclose purification by distillation with a wiped film evaporator at a temperature of 180 to 350 C at a pressure of 4 to 50 Torr is not persuasive. Ryan et al. discloses purification by distillation with a wiped film evaporator (abstract, example 1) at a pressure of 0.05-5 mm Hg and a temperature 100-200 ºC (col. 5 lines 15-20). Also, Ryan et al. describes how a person having ordinary skill in the art would optimize those parameters for the desired product, see rejection above.

B) Applicant's argument that Ryan et al. does not disclose the color hue is reduced by the process is not persuasive. Evidence of this is found in Ryan et al., which teaches distillation removes lighter components (col. 4 lines 50-55) and heavier components (col. 4 lines 66-67) than the desired compound which add to the coloration of the epoxy (col. 2 lines 54-63) and the product has reduced color (abstract).

C) Applicant's argument that there is no rationale or motivation provided to arrive at the present invention is not persuasive. At the time of the invention a person having ordinary skill in the art would have found it obvious to combine the wiped film evaporator of Ryan et al. with the process of Takai and would have been motivated to do so for such desirable properties as obtaining a low color product which is highly pure, as evidenced by Ryan et al. (col. 2 lines 54-63).

D) The double patenting rejection will be removed should the application be indicated allowable.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Megan McCulley whose telephone number is (571)270-3292. The examiner can normally be reached on Monday - Thursday 7:30-6:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571) 272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Eashoo/
Supervisory Patent Examiner, Art Unit 1796

/M. M./
Examiner, Art Unit 1796